REMARKS

Reconsideration and allowance are respectfully requested.

Claims 1-6 and 12-20 are pending. The amendments are fully supported by the original disclosure and, thus, no new matter is added by their entry.

In satisfaction of their duties of candor and good faith, Applicants note that an opposition was filed against the European counterpart of this application. Documents cited in the opposition are listed on the attached Form PTO-1449; copies of the non-U.S. patent documents and the Rule 17(p) fee in lieu of certification are submitted herewith. Consideration of the foregoing and return of an initialed copy of Form PTO-1449 pursuant to 37 CFR § 1.97(c) are requested. If the Examiner would like further information about the opposition including the papers filed therein, he is invited to contact the undersigned. Alternatively, he can obtain the opposition papers himself from EPO Online under European Application 00969458.9/Publication No. 1222469.

35 U.S.C. 102 – Novelty

Claims 1-6 and 12-13 were rejected under Section 102(b) as allegedly based upon a public use or sale of the invention. Applicants traverse because the facts that were provided in the last response are evidence; respectfully, they are not attorney argument. None of the examples of attorney statements listed in M.P.E.P. § 716.01(c) II are directed to the situation here.

In response to the Examiner's requirement for submission of information, the Applicants stated that the Exhibit B insert was first made publicly available on July 12, 2005 and the two-page leaflet entitled "Premi®Test-egg" was released February 2000. It is not clear to Applicants what other information can be provided to the Examiner in response to his requirement for information. Neither document is evidence that the claimed invention was publicly used or sold before the priority date of this application.

The claims are directed to a new use for the Premi®Test instead of its use to analyze other samples. The protocol for analyzing egg samples was not made available to the public prior to April 10, 1999. In contrast, the Premi®Test was initially used for analyzing the contamination by antibiotic of meat; a protocol for using Premi®Test in

analyzing meat samples was made available to the public prior to April 10, 1999 (see Geijp et al., 1998).

What both the leaflet and Exhibit B have in common is that they describe a new method of using an existing product (i.e., Premi®Test) for the analysis of eggs. The leaflet is entitled "Premi®Test-egg" and Exhibit B is entitled "Premi®Test sample procedure for eggs." They contain, however, the same subject matter: a new method of using an existing product. They are merely two different versions of DSM's information to the public on how to apply the previously known Premi®Test to egg samples using a new protocol. They are not evidence supporting a Section 102(b) rejection because the new protocol claimed in this application was not made publicly available before the priority date of this application.

Therefore, while the Premi®Test was known before the earliest claimed priority date, it is incorrect to assume that Premi®Test as applied to meat samples shows either (i) prior disclosure of a protocol as applied to egg samples or (ii) a protocol identical to the presently claimed invention. Premi®Test is a product used to detect antibiotic contamination. Applicants' claims are not directed to a product, but to a method. This method is new because it was not described in any disclosure concerning Premi®Test that was publicly available prior to April 10, 1999.

Withdrawal of the Section 102 rejection is requested because the claimed invention was not "in public use or on sale in this country . . . more than one year prior to the [effective filing] date of this application."

35 U.S.C. 103 – Nonobviousness

To establish a case of prima facie obviousness, all of the claim limitations must be taught or suggested by the prior art. See M.P.E.P. § 2143.03. A claimed invention is unpatentable if the differences between it and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art. *In re Kahn*, 78 USPQ2d 1329, 1334 (Fed. Cir. 2006) citing the legal standard provided in *Graham v. John Deere*, 148 USPQ 459 (1966). The *Graham* analysis needs to be made explicitly. *KSR v. Teleflex*, 82 USPQ2d

1385, 1396 (2007). It requires findings of fact and a rational basis for combining the prior art disclosures to produce the claimed invention. See id. ("Often, it will be necessary for a court to look to interrelated teachings of multiple patents . . . and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue"). The use of hindsight reasoning is impermissible. See id. at 1397 ("A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning"). Thus, a rejection under Section 103(a) requires "some rationale, articulation, or reasoned basis to explain why the conclusion of [prima facie] obviousness is correct." *Kahn*, 78 USPQ2d at 1335; see *KSR*, 82 USPQ2d at 1396. An inquiry should be made as to "whether the improvement is more than the predictable use of prior art elements according to their established functions." Id. at 1396. But a claim which is directed to a combination of prior art elements "is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." Id. at 1396. Finally, a determination of prima facie obviousness requires a reasonable expectation of success. See *In re Rinehart*, 189 USPQ 143, 148 (C.C.P.A. 1976).

Claims 1-6 and 12-16 were rejected under Section 103(a) as allegedly unpatentable over Charm et al. (U.S. Patent 5,345,663). Applicants traverse.

It was alleged that it would have been obvious "to combine the sample with the test reagent prior to heating in order to streamline the method" (page 7 of the Action). It was further alleged that there was a reasonable expectation of success because the test composition is not heat labile (page 7 of the Action). Finally, without citing any part of U.S. Patent 5,345,663, it was alleged that the time limitation set forth in claim 5 (i.e., 10 to 15 minutes) was met and that the lysozyme in claims 12 and 14-20 would necessarily be inactivated (page 7 of the Action). Applicants disagree with all of these allegations for the following reasons.

As taught at page 2 of the specification, inactivating natural inhibitors in an uncoagulated egg sample by heating leads to coagulation of the sample. This result was not taught to be desirable in the prior art because it was thought to require extraction of the

antimicrobial residue from the coagulated sample prior to determining the presence or absence of the antimicrobial residue:

> "heating of an egg sample at temperatures sufficient to inactivate inhibiting substances of the egg, such as lysozyme, always leads to coagulation of the sample. It was believed that such samples are not suitable for further processing anymore.
>
> "Up to now after heating at a temperature sufficient to inactivate antimicrobial substances other than antimicrobial residues, the antimicrobial residues to be detected have to be extracted from the coagulated egg sample. These extraction methods not only cost a lot of time and extra handling but even worse always lead to loss of at least part of the antimicrobial residues, if present in the sample (Inglis et. al., Journal for the Association of Official Analytical Chemists 61: (5) 1098 – 1102 (1978); Katz et. al., Journal of the Association of Official Analytical Chemists 61: (5) 1103 – 1106 (1978); Janetschke et. al., Monatshefe für Veterinaermedizin 34: (21) 824 – 826 (1979); Steiner, Monatshefe für Veterinarmedizin 45: (11) 382 – 386 (1990)). This may lead to false negative results and therefore antibiotics in consumer eggs, which of course is unacceptable from a health point of view."

Inglis et al. and Katz et al. (both have already been made of record) disclosed an extraction step to remove streptomycin or neomycin, respectively, from a coagulated egg sample. Thus, the prior art taught away from relying on diffusion of the antimicrobial residue from the contacted sample as the Applicants taught on page 3 of their specification. Instead, Inglis et al. stated on page 1100 that "recovery [by extraction] is considerably greater than the 10% recovered when the surfactant and the centrifugation steps were not used in conjunction with the heat treatment." Thus, the prior art suggested a longer and more complicated process than the invention claimed in this application.

Applicants' invention does not require extraction of antimicrobial residue from the coagulated egg sample with surfactant, centrifugation, etc. Their invention has the unexpected advantage that after heat inactivation, the antimicrobial residues diffuse from the contacted sample and incubation takes place directly after heating as taught at page 3 of the specification:

> "Unexpectedly it has been found that when an egg sample is added to a test suitable for detecting antimicrobial residues and then is incubated for a sufficient time at a sufficient temperature to inactivate natural inhibiting

> compounds of the egg, the test can be incubated directly after heating to determine the presence or absence of antimicrobial residues.
>
> "It has been surprisingly found that antimicrobial residues diffuse directly from the coagulated egg sample into the test system. Thus additional extraction methods to obtain the antimicrobial residues from the coagulated egg sample are not required."

The success of this simple method was unexpected because prior art such as Inglis et al. and Katz et al. disclosed that performing additional steps to extract the antimicrobial residues from the contacted sample improved recovery (and would be more sensitive thereby). Inglis et al. and Katz et al. are evidence that the prior art recognized that coagulation of egg was an obstacle to recovering antimicrobial residues and this problem suggested the solution of adding extracting steps to improve recovery after heat treatment.

There is no acceptable explanation provided in the Action for why one of ordinary skill in the art would have expected a coagulated egg sample to be successfully tested in view of the problem which was recognized in the prior art that the egg sample would coagulate upon heating. It was alleged in the Action that there was a reasonable expectation of success because the test composition is not heat labile. But an egg sample is different from milk or meat samples that do not coagulate upon heating. In Applicants' invention, the inactivation of natural inhibitors by heat would coagulate an egg sample in a manner that would have been thought to create difficult problems that are not encountered when heating a milk or meat sample. Thus, the heating of an egg sample in contact with a test composition would not have been obvious from the prior art because of the problem caused by coagulation of reduced recovery of antimicrobial residues.

All of the heating times described at col. 3 of Charm et al. are 2 minutes or less. There is no acceptable explanation provided in the Action for why one of ordinary skill in the art would have prolonged heating if 2 minutes was shown to be sufficient to destroy natural inhibitors present in the sample. The Examiner misplaces the burden of proof. The Patent Office is required to provide evidence of prima facie obviousness. Only <u>after</u> prima facie obviousness is established does the burden shift to Applicants to provide evidence of nonobviousness. Thus, claim 5 is patentable since there was no reason

provided in the Action that one of ordinary skill in the art would have found it obvious to lengthen the heating time of 2 minutes as disclosed by Charm et al. to a heating time from 10 to 15 minutes as required by the Applicants' claim.

Charm et al. disclose, "The test kit and method permits the sensitive determination of antimicrobial drugs in a wide variety of materials, particularly in food products and body fluids, for example, but not limited to: raw and pasteurized milk; urine; and other body fluids; and meat." None of these food products are known to contain lysozyme as an inactivating compound. But even if egg was specifically described by Charm et al., inactivation of lysozyme present in the egg sample would not necessarily occur as alleged in the Action because destroying this particular natural inhibitor would depend on the temperature applied during heating and its length of time. There is no acceptable explanation provided in the Action for why one of ordinary skill in the art would have wanted to inactivate lysozyme instead of any other natural inhibitor present in egg. Thus, claims 12 and 14-20 are patentable since there was no reason provided in the Action that one of ordinary skill in the art would have found it obvious to inactivate lysozyme as required by Applicants' claims.

Withdrawal of the Section 103 rejection is requested because the claimed invention would not have been obvious to the ordinarily skilled artisan.

Applicants submit that the claims are in condition for allowance and earnestly solicit an early Notice to that effect. The Examiner is invited to contact the undersigned if any further information is required.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____

Gary R. Tanigawa
Reg. No. 43,180

901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100